FIG. 1

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FIG. 2

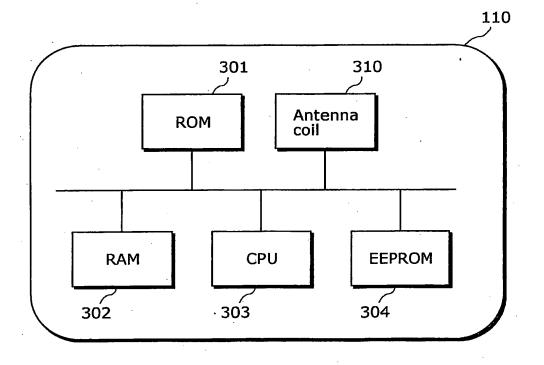
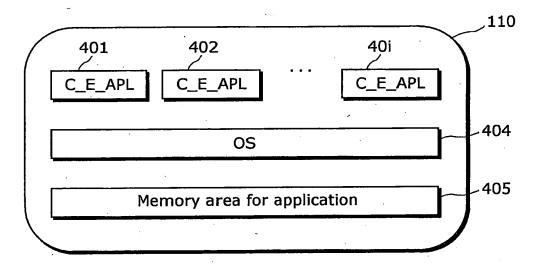
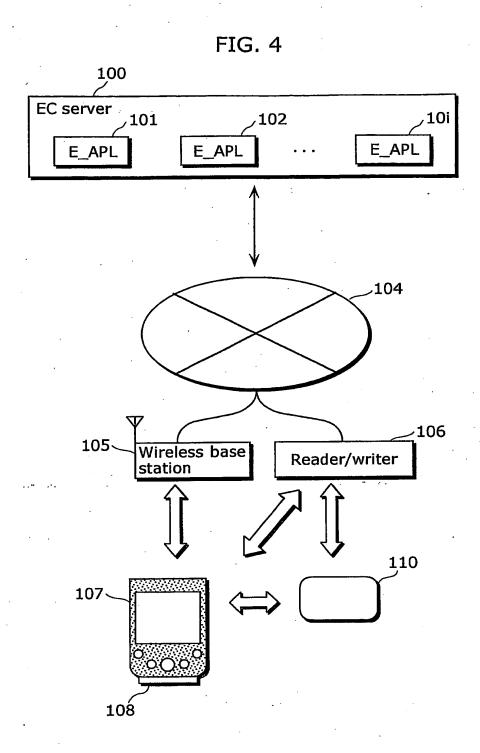
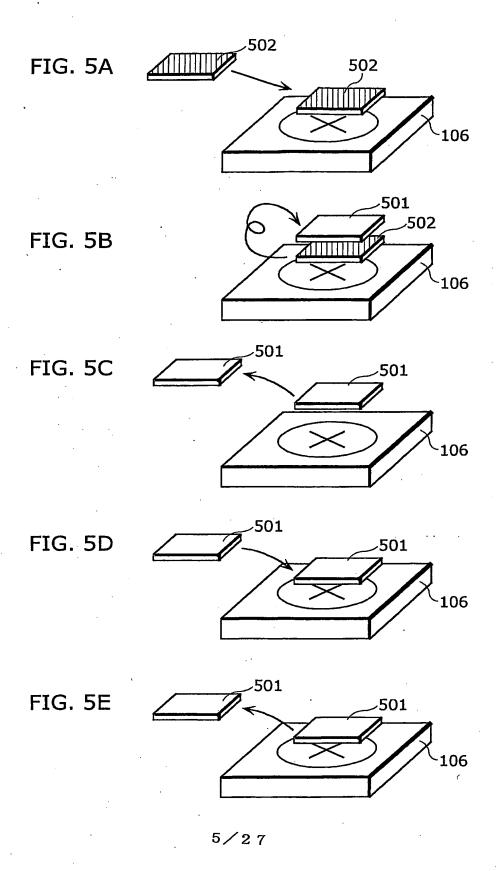
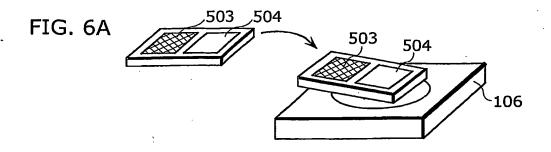


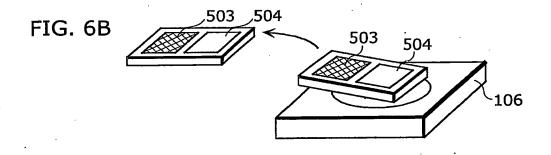
FIG. 3

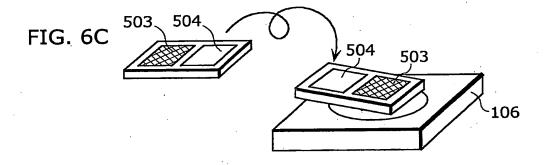


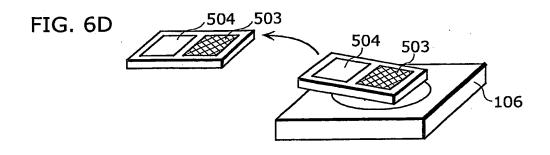


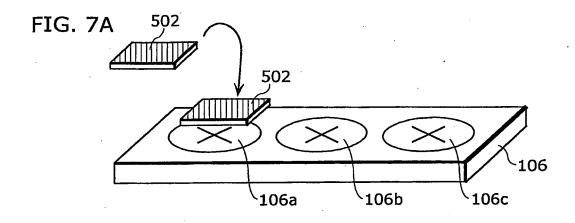


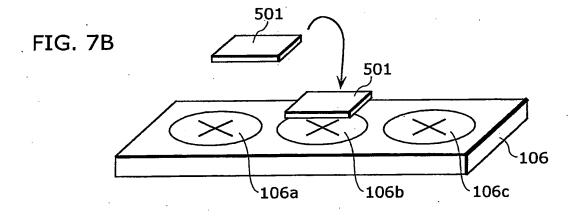












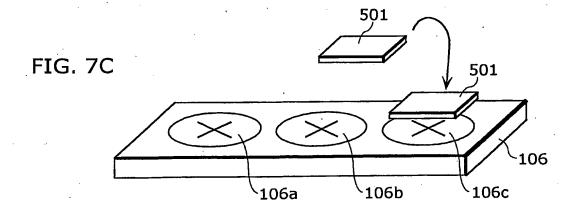
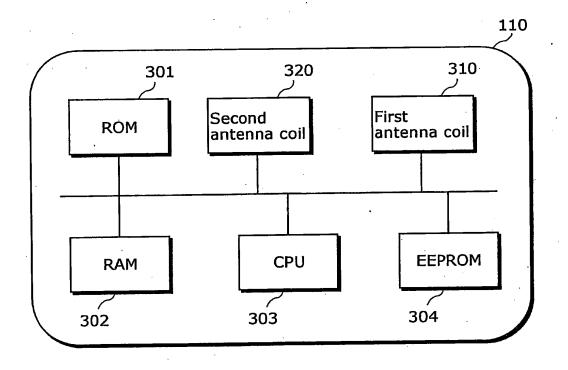


FIG. 8



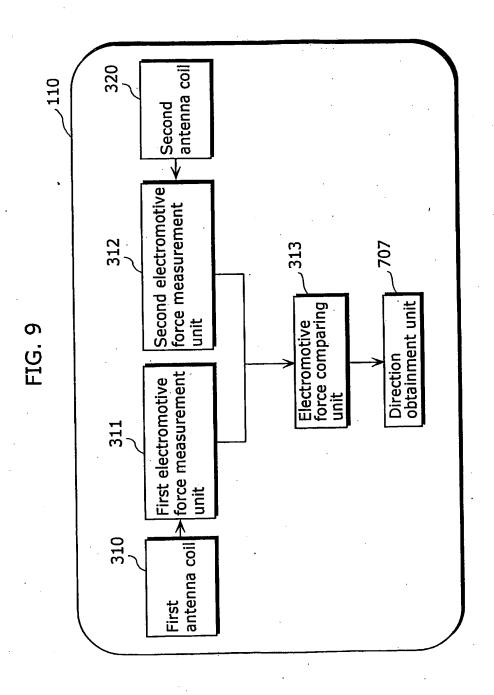


FIG. 10A

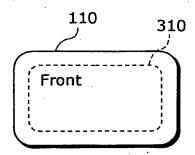


FIG. 10B

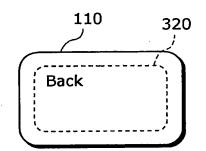
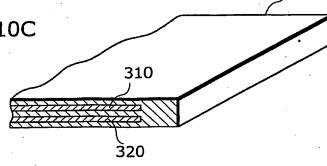
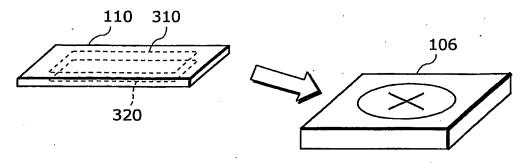


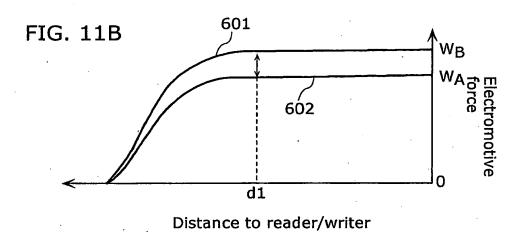
FIG. 10C



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FIG. 11A





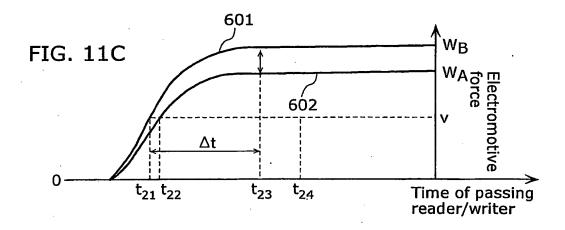
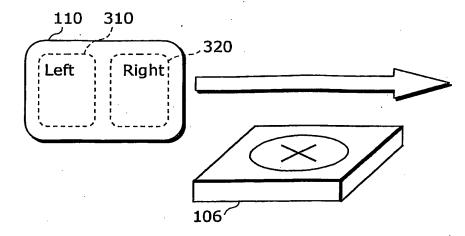
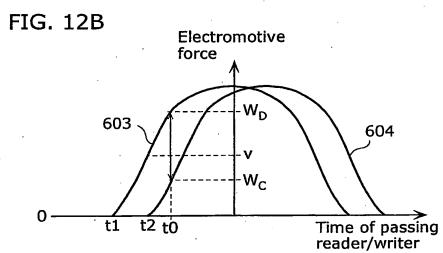


FIG. 12A





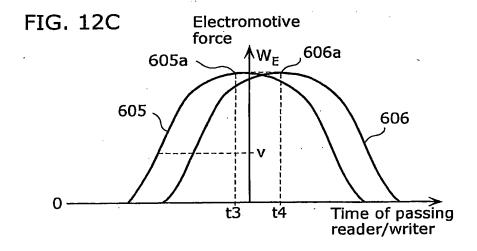
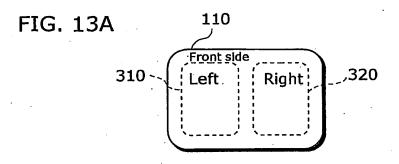
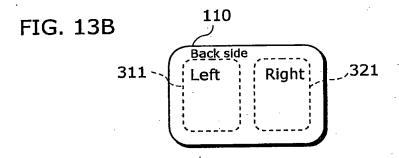
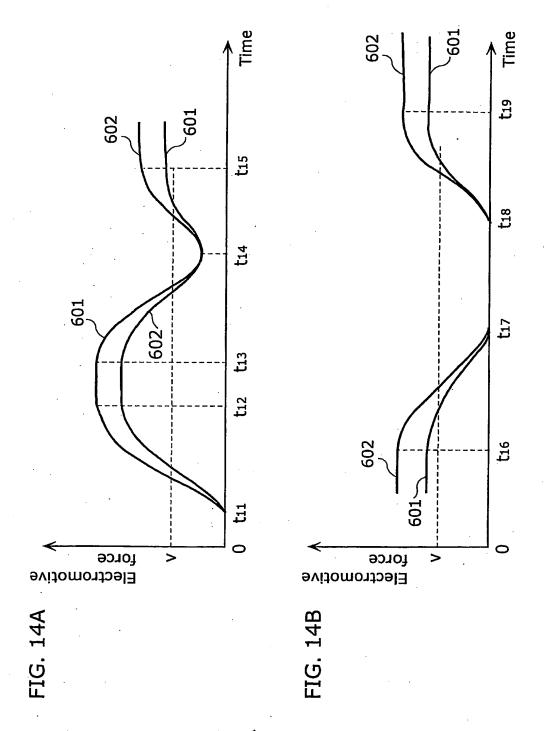


FIG. 13C

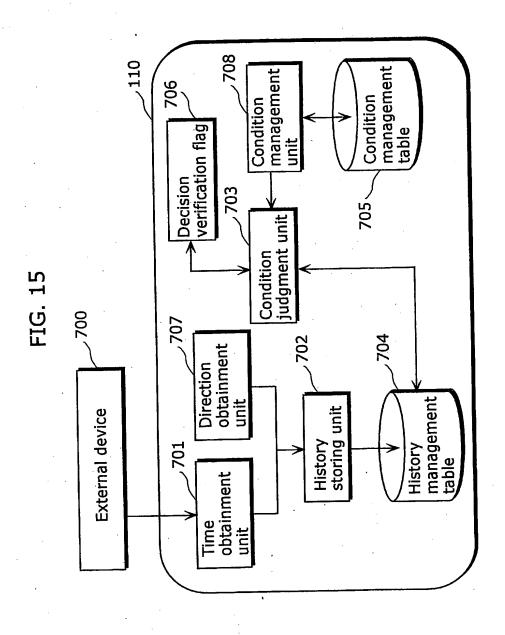


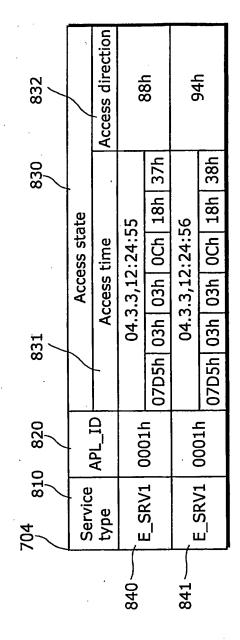


110 310 320 106 311 321



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		0	1100	1103	1111	1117	1112	A111.	1115	1116	1117	1118	1110	1120	1121	1127	7717
1107	Value		80h	88h	84h	82h	81h	90h	98h	94h	92h	91h	00h/10h	08h/18h	04h/14h	02h/12h	01h/11h
1102 1103 1104 1105 1106	Indication		Front side	Front side up	Front side down	Front side left	Front side right	Back side	Back side up	Back side down	Back side left	Back side right	side 1/side 2	side 1/side 2 up	side 1/side 2 down	side 1/side 2 left	side 1/side 2 right
	<b>b1</b>	Left Right	0	0	0	0	1	0	0	0	0	1	0	0	0	0	
	b2		0	0	0	-	0	0	0	0	ᆏ	0	0	0	0	<b>-</b>	0
	b3	Down	0	0	-	0	0	0	0		0	0	0	0	$\vdash$	0	0
	p4	d	0	₩	0	0	0	0	<del>, -</del> -1	0	0	0	0	⊣	0	0	0
1101	b6   b5	Front=0 Back=1	0	i :	1 1 1 1	) 1 1 1	! !	н	: : :	1	; ; ; ;	)         	0/1		] { } } !	 	
			0	 ! ! !	,	7 1 1 1 1		0	·  -  -  -  -	; ;	•	 	0	! ! !	i i	! !	
1100	b7	back ation	0	; ; ; ; ;	1	         	! ! !	0	1 3 9	i !	i i	; ; ;	0	1		1	
	- 8q	Front back verification flag		T	, ·	) ! !	1	<u></u>	,	T - " '	1	] ! !	0			- ~ ~       	
_																	

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80h 10h Time series pattern 02h 10h 80h nbyte 94h 01h 12h 90 Ph 91h Access conditions 1202 80h 10h 01h 11h Time limit 1byte 1204 04h 08h 00 00 양 **09**h OFh APL\_ID Comparison times 2byte 1byte 1203 02h 00h **03h** 02h 04h 04h : • 1201 0001h 0004h 2200h 3312h 0912h 0120h 1200 E\_SRV3 Service type E\_SRV4 E\_SRV1 E\_SRVn E\_SRVi E\_SRV2 705 1212~ 1215 1211 1213

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FIG. 19

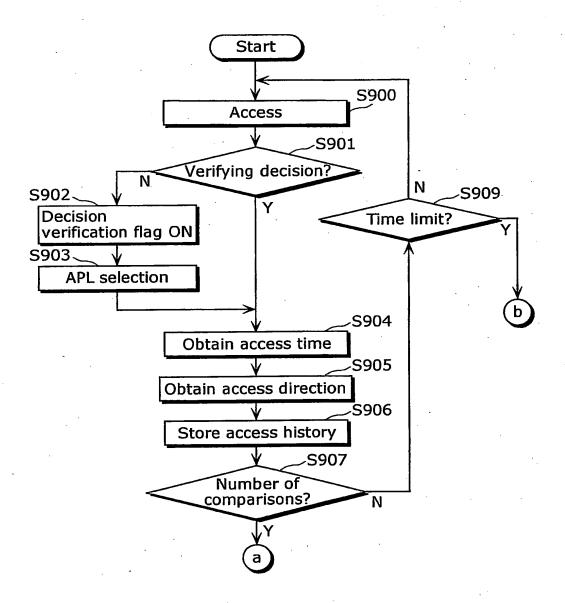
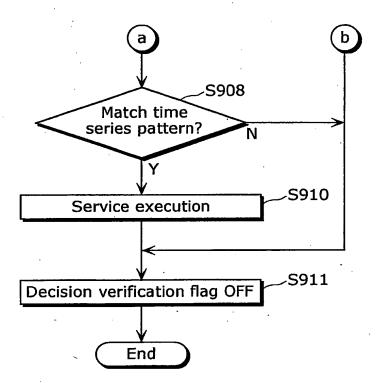


FIG. 20



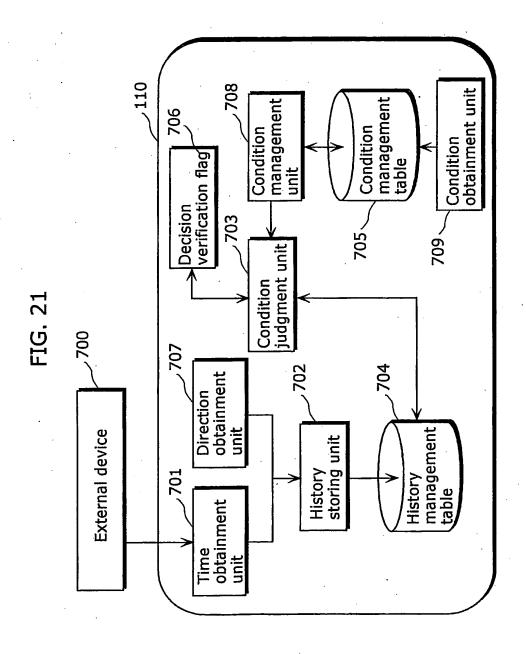


FIG. 22

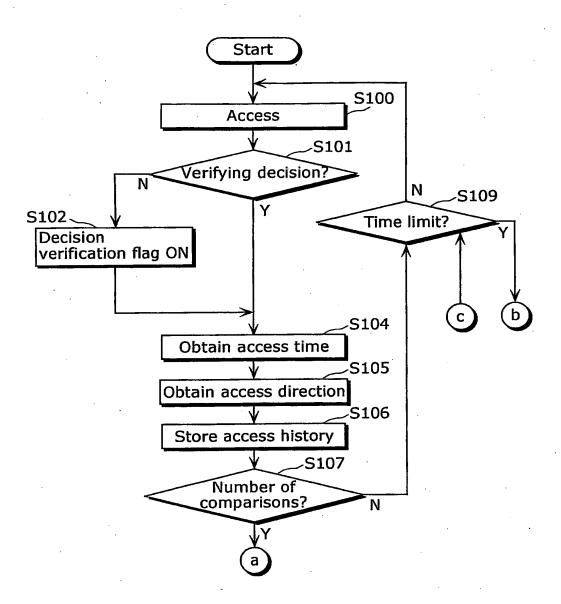
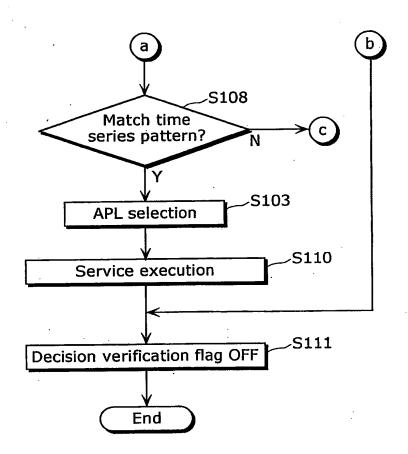
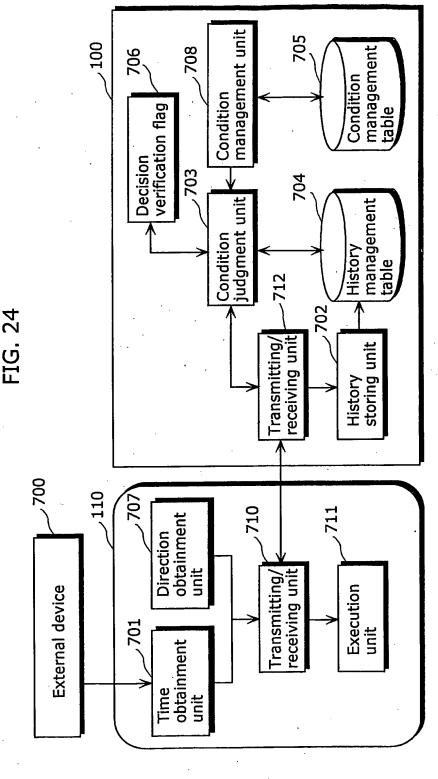


FIG. 23





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FIG. 25 100 110 EC server IC card S120 Access S121 Obtain access time S122 Obtain access method S123 Transmit access history S124 Receive access history S125 Verifying decision? S126 Decision verification flag ON S127~ APL selection S128 Store access history S130 Time limit? S129-Number of comparisons?

FIG. 26 100 110 EC server IC card S131 Match time series pattern? Ν S132 Notify to execute service S134 S133 Decision verification flag OFF Service execution End End

